

REMARKS

1. **Rejection of claims 1-18 under 35 USC 103(a) as obvious over December, U.S. Patent 6,376,616.**

The PTO's rejection is based on the position that

The difference between the present claims and December's reference is the requirement in the present claims of a grafting material comprising at least one amine group wherein a said grafting material is selected from primary amines, secondary amines, and mixtures of both primary and secondary amines. December discloses tertiary amines, column 7, line 5. However, in the alternative, the reaction can be produce by reacting a primary amine or secondary amine or diamine with a cyclic carbonate, column 10, lines 18-19. Therefore, it would have been obvious to one of ordinary skill in the art to use a primary amine or a secondary amine as a grafting material for the reacting with the selected cyclic carbonate functional groups of the acrylic backbone polymer because the degree of grafting and the amine functionality are depending on the balance of the desired solubility (=hydrophilic portion) of the obtained final product.

Office of 9/30/02, page 3.

Applicants greatly appreciate the detailed basis of rejection but must respectfully disagree and submit that claims 1-18 are nonobvious with respect to the '616 patent.

Applicants' claimed method requires the preparation of a particular acrylic backbone polymer (b) having one or cyclic carbonate functional groups (bi). A grafting material (c) having at least one amine group (ci) selected from primary and/or secondary amines is then reacted with the cyclic carbonate functional groups (bi) to make a hydroxyl functional urethanized acrylic graft polymer.

The PTO relies upon two different portions of the '616 patent in its rejection.

First, the PTO argues that acrylics made from the polymerization of monomer (i) when (i) is epoxy functional "read upon" Applicants' acrylic backbone polymer (b) having cyclic carbonate functional groups (bi). Applicants must respectfully but strongly disagree. Nothing has been provided to show the equivalency of cyclic carbonate groups with epoxy groups. Those of ordinary skill appreciate the significant structural differences (cyclic carbonate groups have 3 oxygen atoms, epoxy groups have 1 oxygen atom) and the resulting differences in reactivity, selectivity, etc. Moreover, December clearly limits the teachings of monomer (i) to those ethylenically unsaturated monomers which are isocyanate functional or epoxy functional. To

expand the disclosure of December's teachings as to monomer (i) to cyclic carbonate functional ethylenically unsaturated monomers is impermissible.

Second, the PTO states that

....December discloses tertiary amines, column 7, line 5. However, in the alternative, the reaction can be produced by reacting a primary amine or secondary amine or diamine with a cyclic carbonate, column 10, lines 18-19.

Applicants must respectfully disagree with the PTO's interpretation of December's teachings. The portion of December at col. 7, line 5 refers solely to the use of amines for the neutralization of the plurality of acid groups so as to obtain the required anionic groups. The portion of December at col. 10, lines 18-19 refers to a way of making the principal anodic resin (a). That is, lines 18-19 of col. 10 of the '616 patent refer solely to a method of making a hydroxyalkyl carbamate monomer. Lines 19-21 goes on to teach that an ethylenically unsaturated carbamate functional monomer is obtained by esterifying the hydroxy group of the hydroxyalkyl carbamate by reaction with acrylic or methacrylic acid. The resin (a) is obtained by the polymerization of such acrylic monomers having carbamate functionality in the ester portion of the monomer. *See '616, col. 10, lines 5-28.*

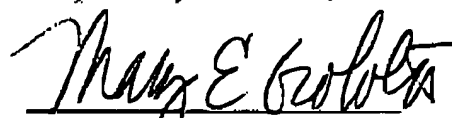
To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *MPEP 2143*

The required motivation to do what Applicants have done is missing in the instant rejection. Rather, it is obvious only in view of Applicants' own teachings. Such 'hindsight' view is prohibited. A statement that modifications of the prior art to meet the claimed inventions would have "*well within the ordinary skill of the art at the time the claimed invention was made*" because the references teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993); *MPEP 2143.01*

In the instant case, one of ordinary skill would have to find a reason to make a cyclic carbonate functional acrylic from ethylenically unsaturated cyclic carbonate functional monomers *before* any reaction occurs with said cyclic carbonate functional groups. December not only fails to provide such motivation, but rather teaches away from Applicants' required method. That is, given the PTO's position, one of ordinary skill would be lead to react the ethylenically unsaturated cyclic carbonate functional monomer with the graft material (c) before the polymerization of acrylic backbone polymer (b), i.e., see col. 10, lines 18-19. This teaches away from the recognition that a cyclic carbonate functional acrylic backbone polymer (b) is required. A reference which leads one of ordinary skill in the art away from the claimed invention cannot render it unpatentably obvious. *Dow Chem. Co. v. American Cyanamid Co.* 2 USPQ2d 1350 (Fed. Cir. 1987)

Accordingly, it is respectfully submitted that December fails to provide all of the required limitations of Applicants' claimed invention as well as the necessary motivation to do what Applicants have done. Reconsideration and removal of the rejection is respectfully required.

Respectfully submitted,



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